This report contains very important information about your drinking water. Please translate it, or speak with someone who understands it.

Si usted desea obtener una copia de este reporte en español, llamenos al teléfono 617-788-1190.

La relazione contiene importanti informazioni sulla qualità dell’acqua della Comunità. Tradurlo o parlarne con un amico che la comprenda.

O relatório contém informações importantes sobre a qualidade da água da comunidade. Traduza-o ou peça a alguém que o ajude a entendê-lo melhor.

Massachusetts Water Resources Authority (MWRA)
Massachusetts Dept. of Environmental Protection
Department of Conservation and Recreation
Massachusetts Dept. of Public Health (DPH)
US Centers for Disease Control & Prevention (CDC)
List of State Certified Water Quality Testing Labs
Source Water Assessment and Protection Reports
Information on Water Conservation
Public Meetings
MWRA Board of Directors
MWRA Advisory Board
Water Supply Citizens Advisory Committee

This report is required under the Federal Safe Drinking Water Act. MWRA PWS ID# 6000000

Where To Go For Further Information

www.mwra.com
www.mass.gov/dep
www.mass.gov/dcr/watersupply.htm
www.mass.gov/dph
www.cdc.gov
www.mwra.com/sourcewater.htm
www.mwra.com/conservation.html
617-242-5323
617-292-5500
617-626-1250
617-624-6000
800-232-4636
617-242-5323
617-242-SAVE
617-788-1117
617-788-2050
413-213-0454

For a large print version, call 617-242-5323.
Dear Customer,

I am pleased to share with you the results of our water quality testing. MWRA takes hundreds of thousands of tests each year, and for 2013, we again met every federal and state drinking water standard. System-wide, we have been below the Lead Action Level for the past ten years. Please read your community’s letter on page 4 for more information on your local water system.

The big news this year is that we have completed the start-up of a new ultraviolet (UV) disinfection facility at the John J. Carroll Water Treatment Plant in Marlborough, improving the quality of the drinking water we deliver to you.

UV light is essentially a more potent form of natural disinfection from sunlight. UV enables MWRA to inactivate the most difficult to kill pathogens - which could potentially be in the source water - without the use of additional chemicals and any associated disinfection by-products. The UV process and MWRA’s high quality source water allow MWRA to meet new regulatory requirements cost effectively.

Since 2005, your water has been treated with ozone - produced by applying an electrical current to pure oxygen. Ozone has ensured strong protection against microbes and viruses, improves water clarity, and has actually made the water taste better. The addition of the UV to the ozone process provides additional assurance that any pathogens potentially in our reservoirs will be rendered harmless.

In addition, fluoride is added to promote dental health and the water chemistry is adjusted to reduce corrosion of lead and copper from home plumbing. Last, we add monochloramine, a mild and long-lasting disinfectant combining chlorine and ammonia to protect the water as it travels through miles of pipelines to your home.

In a few short years, water treatment has gone from chlorine with its taste and odor issues, to ozone and now ultraviolet – with no additional chemicals and no disinfection by-products. Just better, safer water.

I hope you will take a few moments to read this report. We want you to have the same confidence we have in the water we deliver to over 2 million customers. Please contact us if you have any questions or comments about your water quality, or any of MWRA’s programs.

Sincerely,

Frederick A. Laskey
Executive Director

MWRA BOARD OF DIRECTORS
Richard K. Sullivan, Jr., Chairman
John J. Carroll, Vice-Chair
Joseph C. Foti, Secretary
Joel A. Barrera
Kevin L. Cotter
Paul E. Flanagan
Andrew M. Pappastergjon
Brian R. Swett
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John J. Walsh
Jennifer L. Wolowicz

MWRA Water System
Where Does Your Water Come From?

Your water comes from the Quabbin Reservoir, about 65 miles west of Boston, and the Wachusett Reservoir, about 35 miles west of Boston. These reservoirs supply wholesale water to local water departments in 51 communities. The two reservoirs combined supplied about 200 million gallons a day of high quality water to consumers in 2013.

The Quabbin and Wachusett watersheds are naturally protected with over 85% of the watersheds covered in forest and wetlands. To ensure safety, the streams and reservoirs are tested often and patrolled daily by the Department of Conservation and Recreation (DCR).

Rain and snow falling on the watersheds - protected land around the reservoirs - turn into streams that flow to the reservoirs. This water comes in contact with soil, rock, plants, and other material as it follows its natural path to the reservoirs. While soil and rock do not typically cause problems in the water. But, water can also transport contaminants from human and animal activity. These can include bacteria and viruses - some of which can cause illness. The test data in this report show that these contaminants are not a problem in your reservoirs' watersheds.

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program report for the Quabbin and Wachusett Reservoirs. The DEP report commends DCR and MWRA on the existing source protection plans, and states that our “watershed protection programs are very successful and greatly reduce the actual risk of contamination.” MWRA follows the report recommendations to maintain the pristine watershed areas using existing watershed plans.

Test Results – After Treatment

EPA and state regulations require many water quality tests after treatment to check the water you are drinking. MWRA conducts hundreds of thousands of tests per year on over 120 contaminants (a complete list is available on www.mwra.com). Details about 2013 test results are in the table below. The bottom line is that water quality is excellent.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Units</th>
<th>(MCL) Highest Level Allowed</th>
<th>(We found) Level-Average</th>
<th>Range of Detects</th>
<th>(MCLG) Ideal Goal</th>
<th>Violation</th>
<th>How it gets in the water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>ppm</td>
<td>2</td>
<td>0.008</td>
<td>0.007-0.009</td>
<td>2</td>
<td>No</td>
<td>Common mineral in nature</td>
</tr>
<tr>
<td>Monochloramine</td>
<td>ppm</td>
<td>4-MRDL</td>
<td>1.8</td>
<td>0.01-4.0</td>
<td>4-MRDLG</td>
<td>No</td>
<td>Water disinfectant</td>
</tr>
<tr>
<td>Fluoride</td>
<td>ppm</td>
<td>4</td>
<td>1.04</td>
<td>0.37-1.1</td>
<td>4</td>
<td>No</td>
<td>Additive for dental health</td>
</tr>
<tr>
<td>Nitrate^</td>
<td>ppm</td>
<td>10</td>
<td>0.08</td>
<td>0.01-0.08</td>
<td>10</td>
<td>No</td>
<td>Atmospheric deposition</td>
</tr>
<tr>
<td>Nitrite^</td>
<td>ppm</td>
<td>1</td>
<td>0.005</td>
<td>ND-0.005</td>
<td>1</td>
<td>No</td>
<td>Byproduct of water disinfection</td>
</tr>
<tr>
<td>Total Trihalomethanes</td>
<td>ppb</td>
<td>80</td>
<td>10.1</td>
<td>3.0-13.9</td>
<td>ns</td>
<td>No</td>
<td>Byproduct of water disinfection</td>
</tr>
<tr>
<td>Haloacetic Acids-5</td>
<td>ppb</td>
<td>60</td>
<td>9.0</td>
<td>1.4-13.2</td>
<td>ns</td>
<td>No</td>
<td>Byproduct of water disinfection</td>
</tr>
<tr>
<td>Total Coliform</td>
<td>%</td>
<td>5%</td>
<td>0.5% (Nov)</td>
<td>ND-0.5%</td>
<td>0</td>
<td>No</td>
<td>Naturally present in environment</td>
</tr>
</tbody>
</table>

KEY: MCL = Maximum Contaminant Level. The highest level of a contaminant allowed in water. MCLs are set as close to the MCLGs as feasible using the best available technology. MCLG = Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. MRDL = Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. MRDLG = Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

^As required by DEP, the maximum result is reported for nitrate and nitrite, not the average.

Sodium Facts

Sodium in water contributes only a small fraction of a person’s overall sodium intake (less than 10%). MWRA tests for sodium monthly and the highest level found was 35.9 mg/L (about 9 mg per 8 oz. glass). This would be considered Very Low Sodium by the Food and Drug Administration.
Tests in Community Pipes
MWRA and local water departments test 300 to 500 water samples each week for total coliform bacteria. Total coliform bacteria can come from the intestines of warm-blooded animals, or can be found in soil, plants, or other places. Most of the time, they are not harmful. However, their presence could signal that harmful bacteria from fecal waste may be there as well. The EPA requires that no more than 5% of the samples in a month may be positive. If a water sample does test positive, we run more specific tests for E. coli, which is a bacteria found in human and animal fecal waste and may cause illness. No E. coli was found in any MWRA community in 2013. If your community found any total coliform, it will be listed within the community letter on page 4.

Contaminants in Bottled Water and Tap Water
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (1-800-426-4791) or MWRA. In order to ensure that tap water is safe to drink, the Massachusetts DEP and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Research for New Regulations
MWRA has been working with EPA and other researchers to define new national drinking water standards by testing for unregulated contaminants. To read more about this testing, and to see a listing of what was found, please visit www.mwra.com/UCMR/2013.html.

Drinking Water and People with Weakened Immune Systems
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA’s Safe Drinking Water Hotline (1-800-426-4791).

Information About Cross Connections
Massachusetts DEP recommends the installation of backflow prevention devices for inside and outside hose connections to help protect the water in your home as well as the drinking water system in your town. For more information on cross connections, please call 617-242-5352 or visit www.mwra.com/crosscon.html.
The Swampscott Department of Public Works, PWS ID #329100, is pleased to provide this annual newsletter to keep you informed about your water system. We would like to provide a recap of the major points for any new customers or residents who may not have seen last year’s newsletter.

Our Distribution System

The Town of Swampscott purchases all of its water directly from the MWRA. The water is delivered through two MWRA master meters into the town’s distribution system. The distribution system consists of the network of pipes, valves, hydrants and service lines. The system delivers water to homes, businesses and other facilities for drinking and other uses. The system is also used for fire protection.

Swampscott’s distribution system is comprised of approximately fifty-eight miles of water mains ranging from six-inch to sixteen-inch diameter. There are four hundred and seventy-three hydrants that are owned and maintained by the town. There are approximately fourteen hundred gate valves that allow isolated portions of the system to be shut down for repairs and maintenance. Seventy percent of the pipes in the distribution system are over fifty years old with the majority being unlined cast iron pipe. Unlined pipe allows tuberculation (rust) to grow on the inside surfaces of the pipe. While not a health problem, these tubercles can affect the ability of the pipe to carry flows for fire protection purposes and can affect the appearance of the water, such as yellow and red water problems.

In addition to steps taken by the MWRA to protect water quality, the Town of Swampscott has continued to make improvements to the water system. Improvements include a 2013 town-wide leak detection survey. During the survey a total of five leaks were located which contributed to an estimated leakage of approximately 123,600 gallons per day. The subsequent repairs led to the reduction of unaccounted water that the Town of Swampscott is purchasing from the MWRA.

Lead and Copper Results

The Town is responsible for conducting lead and copper test samples on a newly regulated annual basis. It is important to note that the water supplied by the MWRA does not contain any lead. However, Swampscott remains concerned about lead in tap water. Therefore, we test fifteen homes yearly. The 90th percentile level for Swampscott was 3.02 ppb, which is below the Action Level of 15 ppb. Similarly, for copper the 90th percentile level for Swampscott was 114 ppb, which is well below the Action Level of 1300 ppb. For more information about the potential presence of lead in tap water and steps that may be taken to reduce exposure, please see page 5.

Total Coliform Testing in Community Pipes

The MWRA and Swampscott test nine water samples each bi-weekly for total coliform bacteria. The EPA requires that no more than 5% of the samples in a month may be positive. Swampscott had a 4.8% positive result in the month of October. All follow-up samples were clear, and this was not a concern.

Then Town of Swampscott is committed to providing its residents with the best water possible. As our customers, we hope that you will find this report informative and useful. If you would like to obtain additional information on particular subjects, or have specific questions, please feel free to contact the Department of Public Works, at (781) 596-8860, or email the Director at gcresta@town.swampscott.ma.us. You may also contact MWRA directly using the phone number listed in this report.

Gino A. Cresta Jr., Director of Public Works
What You Need to Know about Lead in Tap Water

MWRA water is lead-free when it leaves the reservoirs. MWRA and local pipes that carry the water to your community are made mostly of iron and steel and do not add lead to the water. However, lead can get into tap water through pipes in your home, your lead service line, lead solder used in plumbing, and some brass fixtures. Corrosion or wearing away of lead-based materials can add lead to tap water, especially if water sits for a long time in the pipes before it is used.

In 1996, MWRA began adding sodium carbonate and carbon dioxide to adjust the water’s pH and buffering capacity. This change has made the water less corrosive, thereby reducing the leaching of lead into drinking water. Lead levels found in sample tests of tap water have dropped by almost 90% since this treatment change.

MWRA Meets Lead Standard in 2013

Under EPA rules, each year MWRA and your local water department must test tap water in a sample of homes that are likely to have high lead levels. These are usually homes with lead service lines or lead solder. The EPA rule requires that 9 out of 10, or 90%, of the sampled homes must have lead levels below the Action Level of 15 parts per billion (ppb).

All 18 sampling rounds over the past ten years have been below the EPA standard. Results for the 452 samples taken in September 2013 are shown in the table. 9 out of 10 houses were below 6.3 ppb, which is below the Action Level of 15 ppb. Only two communities had more than one home test above the Action Level for lead. If you live in either of these communities, your town letter on page 4 will provide you with more information.

### September 2013 Lead and Copper Results

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>90% Value</th>
<th>(Target) Action Level</th>
<th>(Ideal Goal) MCLG</th>
<th>% Home Above AL/</th>
<th>Homes Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (ppb)</td>
<td>0-0.3</td>
<td>6.3</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>8/452</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>0-46.9</td>
<td>0.1</td>
<td>1.3</td>
<td>0</td>
<td>0</td>
<td>0/452</td>
</tr>
</tbody>
</table>

**KEY:** AL = Action Level—The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. Definition of MCLG available on page 2.

### How do I reduce my exposure to lead in drinking water?

- Run the tap until after the water feels cold. To save water, fill a pitcher with fresh water and place in the refrigerator for future use.
- Never use hot water from the faucet for drinking or cooking, especially when making baby formula or other food for infants.
- Ask your local water department if there are lead service lines leading to your home.
- Check your plumbing fixtures to see if they are lead-free. Read the labels closely.
- Test your tap water. Call the MWRA Drinking Water Hotline (617-424-5323) or visit our website for more tips and a list of DEP certified labs that can test your water.
- Be careful of places you may find lead in or near your home. Paint, soil, dust and some pottery may contain lead.
- Call the Department of Public Health at 1-800-532-9571 or EPA at 1-800-424-LEAD for health information.